

Remarks:

Reconsideration of the application is respectfully requested.

Claims 1 - 10 are presently pending in the application. No claims have been amended or canceled.

In item 2 of the above-identified Office Action, claims 1 - 10 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U. S. Patent No. 6,757,256 to Anandakumar et al ("ANANDAKUMAR").

Applicants respectfully traverse the above rejections.

I. **Applicants' claims all require, among other limitations, "first data with real-time requirement" and "second data without real-time requirement".**

Applicants' independent claims 1 and 8 require, among other limitations, the transmission of "**first data with real-time requirement**" and "**second data without real-time requirement**". Applicants' claim 10 incorporates all of the limitations of claim 8, therein.

The instant application contrasts "**data with real-time requirement**" with "**data without real-time requirement**", on page 3 of the instant application, line 17 - page 4, line 12, as follows:

"In the case of multimedia data to be transmitted, a distinction must be made between data to be transmitted in a case of which, in particular, a very high demand must be made that it can be guaranteed, that the delay time between the data is very short as is the case, for example, with voice data or video data. In the case of voice data, it is particularly important that the voice data transmitted are received at the receiving computer with very little delay since otherwise the quality of the received reconstructed voice data is considerably reduced for the user of the receiving computer who listens to the reconstructed voice data. In particular, such requirements will also be called real-time requirements of the data in the text which follows.

In contrast, a usual multimedia data stream also contains second data without real-time requirements, for example text data or also still-image data.

In the case of such data, it is only generally important that the data are transmitted as free of errors as possible but not necessarily that, for example, the delay of the transmission between the individual data elements is as short as possible.

See also, page 9 of the instant application, line 25, through page 10, line 18. As such, as defined in the instant application, "data with real-time requirement" is a particular type of data, in particular, in which a "very high demand must be made that it can be guaranteed, that the delay time between the data is very short as is the case, for example, with voice data or video data". The specification of the instant application defines "data without real-time requirement" as a different type of data, in which "it is only generally important that the data are transmitted as free of errors as possible but not necessarily that, for example, the delay of

the transmission between the individual data elements is as short as possible".

Thus, Applicants' claimed "first data with real-time requirement" actually comprises a different category of data (i.e., data of a different type, such as voice data vs. text data) than Applicants' claimed "second data without real-time requirement". The difference between Applicants' claimed first and second data types is not that one data is transmitted in real-time, and the other is not, but that the first type of data is of a type with a real-time requirement (i.e., urgency) and the second type of data is of a type without a real-time requirement (i.e., no urgency). Resending packets of data with a real-time requirement (i.e., resending lost packets) at a different time, does not change those packets "with real-time requirement" into data packets "without real-time requirement" (i.e., a whole different type of data, such as voice vs. text).

II. Contrary to the statement made in the Office Action, ANDAKUMAR does not teach or suggest, among other limitations of Applicants' claims, the transmission of Applicants' claimed "second data without real-time requirement".

As stated in Applicants' previous response, the ANANDAKUMAR reference discloses a process for sending real-time information (i.e., information with real-time requirements).

See the title, the Abstract, line 1, also, column 2, lines 10 - 14, column 3, lines 66 - 67 and elsewhere. The **ANANDAKUMAR** reference does not teach or suggest transmitting data without a real-time requirement, as required by Applicants' claims.

In response to Applicants' previous arguments that **ANDAKUMAR** does not disclose transmitting data without real-time requirement, it was alleged on pages 6-7 of the Office Action:

"In response to A) Anandakumar teaches a method of sending packets of real-time information at a sender includes steps of initially generating at the sender the packets of real-time information with a source rate greater than zero kilobits per second, and a time or path or combined time/path diversity rate. When the QoS is on an unacceptable side of said threshold increases the diversity rate and sends not only additional ones of the packets of real-time information but also sends diversity packets at the diversity rate as increased (see abstract). Anandakumar teaches the method sends real time packets and diversity packets where the diversity packets are packets that were lost and are retransmitted at a later time because the 'real time packets were lost'. Therefore the diversity packets are considered to be non-real time packets since the diversity packets are a retransmission of real-time packets. There is no limitation in the claim on what differs a real time packet from a non-real time packet or the transmission times of the packets and therefore the real time packets and the diversity packets taught by Anandakumar meets the scope of the claimed limitation 'transmitting first data with real-time requirement and a plurality of second quality of service classes in the application layer for transmitting second data without real-time requirement'." [emphasis added by Applicants]

Applicants respectfully disagree. **ANDAKUMAR** only discloses sending packets of real-time information. Thus, **ANDAKUMAR**

only teaches transmitting data with real-time requirements.

For example, col. 3 of **ANDAKUMAR**, line 66 - col. 4, line 13, states:

"In one form of the invention, a process of sending packets of real-time information at a sender includes steps of initially generating at the sender the packets of real-time information with a source rate greater than zero kilobits per second, and a time or path or combined time/path diversity rate, the amount of diversity initially being at least zero kilobits per second. The process sends the packets, thereby resulting in a quality of service QoS, and optionally obtains at the sender a measure of the QoS. Another step compares the QoS with a threshold of acceptability, and when the QoS is on an unacceptable side of said threshold increases the diversity rate and sends not only additional ones of the packets of real-time information but also sends diversity packets at the diversity rate as increased. Also, rate/diversity adaptation decision may be performed at receiver."

[emphasis added by Applicants]

The diversity packets of **ANANDAKUMAR** are described in col. 8 of **ANANDAKUMAR**, lines 31 - 33, which states:

"'Diversity packet,' where the term is used herein sometimes means a self-contained packet with its own header and diversity information. However, the term 'diversity packet' can also mean diversity bits and extra header bits put in a packet that already has a header and a payload." [emphasis added by Applicants]

In **ANANDAKUMAR**, there are two types of diversity information:
a) time diversity; and b) path diversity. Time diversity and path diversity packets are summarized in col. 8 of **ANANDAKUMAR**, lines 20 - 27, which states:

"In time diversity, information about packet n is also transmitted in packet n+1 and sometimes in even further packets where packets having at least some information in common with each other are called dependent packets.

Path Diversity sends dependent packets over two or more paths in the network, thus increasing the probability of recovering the information that was coded to produce the dependent packets." [emphasis added by Applicants]

Clearly, the diversity packets of ANANDAKUMAR are still packets of data with a real-time requirement, only shifted in time or path. As stated above, resending at a different time, packets of "data with a real-time requirement" (i.e., voice data, which has a real-time requirement) does not convert the data into "data without a real-time requirement" (i.e., a whole different type of data, such as text, which does not have a "real-time requirement").

The "diversity packets" of ANANDAKUMAR are understood to be packets of real-time data having headers and information, which were determined to be previously transmitted below a threshold of acceptability. In ANANDAKUMAR, "time diversity" is the retransmission of lost packets at later moments in time (i.e., information about packet n is also transmitted in packet n+1), whereas, "frequency diversity" or "path diversity" is the retransmission of lost packets on different frequencies or paths. However, regardless of which type, time or rate, a diversity packet is a retransmitted packet of the original real-time data thus, is data with a real-time

requirement. Thus, in **ANANDAKUMAR**, "diversity packets" formed from original packets of data with **real-time requirement**, are, themselves, merely retransmitted packets of data with **real-time requirement**. Changing the diversity requirements for the retransmission of real-time packets does not change the type of the data (i.e., does not convert the data into **data without real-time requirement**). In fact, the **ANANDAKUMAR** reference fails to teach or suggest the transmission of Applicants' claimed "**second data without real-time requirement**".

III. Applicants' claims all require, among other limitations, "a plurality of first quality of service classes" for transmitting the "first data" and "a plurality of second quality of service classes" for transmitting the "second data" and a "combined quality of service class formed from the first quality of service classes and the second quality of service classes".

Additionally, Applicants' independent claims 1 and 8 recite, among other limitations, "**a plurality of first quality of service classes**" for transmitting the "**first data**" and "**a plurality of second quality of service classes**" for transmitting the "**second data**".

Further, Applicants' independent claims 1 and 8 require, among other limitations, "**a combined quality of service class formed from the first quality of service classes and the second quality of service classes**". Page 11 of the instant

application, line 1 - page 12, line 18 describes the combined quality of service class

Further yet, Applicants' independent claim 1 recites, among other limitations,

"supplying the first data and the second data and the transmission parameters of the selected combined quality of service class to a unit of a transport layer, and transmitting the first data and the second data with the unit taking into consideration the transmission parameters." [emphasis added by Applicants]

Similarly, independent claim 8 recites, among other limitations,

"a transmission unit of a transport layer receiving from said processor the first data and the second data and the transmission parameters of the selected combined quality of service class, and transmitting the first data and the second data taking into consideration the transmission parameters." [emphasis added by Applicants]

As noted above, Applicants' claim 10 incorporates all of the features of Applicants' claim 8.

IV. ANDAKUMAR does not teach or suggest, among other limitations of Applicants' claims, "a plurality of second quality of service classes" for transmitting the "second data" and a "combined quality of service class formed from the first quality of service classes and the second quality of service classes".

As stated above in section II, incorporated herein by reference, **ANANDAKUMAR** neither teaches, nor suggests, transmitting "**second data without real-time requirement**", as required by Applicants' claims.

In not teaching or suggesting transmission of Applicants' claimed "**second data**", **ANANDAKUMAR** additionally fails to teach or suggest "**a plurality of second quality of service classes**" for transmitting the "**second data**". Additionally, as **ANANDAKUMAR** fails to teach or suggest the claimed "**second quality of service classes**", **ANANDAKUMAR**, resultantly, also must fail to teach Applicants' particularly claimed "**combined quality of service class**".

As **ANANDAKUMAR** fails to teach or suggest Applicants' claimed "**second data**" and "**combined quality of service class**", **ANANDAKUMAR** must also fail to teach or suggest Applicants' particularly claimed "**unit**"/"**transmission unit**".

With regard to the arguments made by Applicants' in the previous response, that **ANDAKUMAR** does not teach or suggest a combined quality of service class, the Office Action states on page 7, that:

"In response to B) Anandakumar teaches the packets are transmitted at a rate where the rate is compared to a threshold rate set by the user. If the transmission

rate is greater than the threshold, then the packets are transmitted, otherwise the rate is increased to meet the required threshold. The transmission rate is considered to be the first quality of service and threshold is considered to be the second QOS where the transmission rate and the threshold are combined to determine whether the packets can be transmitted or not (see abstract). There is no limitation on the content or rules used to determine the quality of service and therefore Anandakumar meets the scope of the claimed limitation "the first data and the second data and the transmission parameters of the selected combined quality of service class to a unit of a transport layer." [emphasis added by Applicants]

Applicants' respectfully disagree with the statements made in the Office Action. As shown above, **ANANDAKUMAR** compares the QoS with a threshold of acceptability. If the QoS is unacceptable, compared to the threshold, the diversity rate will be increased, by the QoS won't be changed. See **ANANDAKUMAR**, col. 4, lines 5 - 13. Thus, only the diversity rate is changed. Therefore there is only one QoS for all packets in **ANANDAKUMAR**. A combined quality of service class formed from the first quality of service class and second quality of service classes, as required by the claimed invention, is neither taught, nor suggested by **ANANDAKUMAR**.

Further, the threshold of **ANANDAKUMAR** cannot correlate to Applicants' claimed plurality of second quality of service classes, because it does not relate to Applicants' second "data without real-time requirement", which is neither taught, nor suggested in **ANANDAKUMAR**. As such, **ANANDAKUMAR** fails to

teach or suggest, among other limitations of Applicants' claims, the claimed "plurality of second quality of service classes"

In fact, the **ANANDAKUMAR** reference actually teaches away from Applicants' second quality of service class, and thus the combined service class, by only teaching the use of **data with real-time requirements** (i.e., real-time packets).

V. Conclusion.

Applicants' claims are believed patentable over **ANANDAKUMAR**, because, **ANANDAKUMAR** fails to teach or suggest, among other things, Applicants' claimed "second data without real-time requirement", "a plurality of second quality of service classes" for transmitting "second data without real-time requirement", "a combined quality of service class formed from the first quality of service classes and the second quality of service classes" and Applicants' particularly claimed "unit"/"transmission unit".

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 8 and 10. Claims 1, 8 and 10 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because

they all are ultimately dependent on claims 1 or 8. As it is believed that the claims were patentable over the cited art in their original form, the claims have not been amended to overcome the references.

In view of the foregoing, reconsideration and allowance of claims 1 - 10 are solicited.

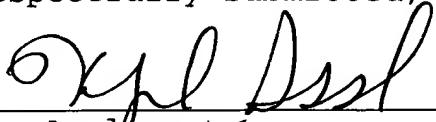
In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested, as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Appl. No. 09/829,792
Response Dated May 11, 2005
Responsive to Office Action of March 11, 2005

Respectfully submitted,


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May 11, 2005

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